

CLAIMS

1. A storage system comprising:

a container having an outer wall and a first open end, said container defining an interior;

a closure lid configured to be inserted within said open end and adapted to engage in a

5 sealing relationship with said outer wall; and

a compression link having a container engagement surface and a closure lid engagement surface, said compression link being configured to engage between said closure lid and said outer wall of said container to retain said closure lid in sealing engagement with said container, said container engagement surface and said closure lid engagement surface being configured to extend outwardly from each other, said container engagement surface being adapted to engage said outer wall and said closure lid engagement surface being adapted to engage said closure lid such that, said closure lid is retained in sealing engagement with said outer wall.

2. The storage system of claim 1, wherein said outer wall has a closure lid retention ledge formed thereon, and wherein said container engagement surface is adapted to engage said closure lid retention ledge.

3. The storage system of claim 1, wherein said closure lid has a stepped outer surface defining an annular region, and wherein said compression link is adapted to be received within said annular region.

4. The storage system of claim 1, wherein said outer wall has a recess formed therein for receiving at least a portion of said compression link.

5. The storage system of claim 1, further comprising a backing member adapted to be inserted between said closure lid and said compression link such that insertion therebetween urges said compression link radially outwardly from said closure lid and positions said container engagement surface of said compression link for engagement with said outer wall.

6. The storage system of claim 1, further comprising:
an outer lid configured for engaging a distal end of said container such that said closure lid is disposed between said outer lid and said interior.

7. The storage system of claim 1, further comprising:
a bearing member configured to engage said closure lid and said closure lid engagement surface of said compression link, said bearing member being formed of a material harder than a hardness of said closure lid.

8. The storage system of claim 1, further comprising:
an exothermic material, wherein said exothermic material has been inserted within said container and sealed therein.

9. The storage system of claim 6, wherein said outer lid has a lid hold-down member associated therewith for retaining said outer lid in sealing engagement with said container.

5 10. The storage system of claim 7, wherein said bearing member has a recess formed therein, said recess being adapted to receive said closure lid engagement surface of said compression link, and wherein said closure lid has a stepped outer surface, said stepped outer surface being adapted to engage said bearing member.

10 11. The storage system of claim 8, wherein said exothermic material is spent nuclear fuel.

12. The storage system of claim 9, wherein said outer wall has a recess formed in an outer surface thereof, and wherein said hold-down member has a retention ledge configured to engage said recess.

13. A storage system comprising:

a container having an outer wall and a first open end, said container defining an interior;

a closure lid configured to be inserted within said open end and adapted to engage in a sealing relationship with said outer wall; and

means for retaining said closure lid in sealing engagement with said outer wall.

14. The storage system of claim 13, further comprising:

an outer lid configured for engaging a distal end of said container such that said closure lid is disposed between said outer lid and said interior; and

means for retaining said outer lid in sealing engagement with said container.

15. The storage system of claim 13, further comprising:

an exothermic material, wherein said exothermic material has been inserted within said container and sealed therein.

16. The storage system of claim 15, wherein said exothermic material is spent nuclear fuel.

17. A method for storing a material comprising:

providing a container having a first open end and defining an interior;

providing a closure lid adapted to be received within the open end;

sealing the closure lid to the container by placing a portion of the closure lid under compression and a corresponding portion of the outer wall under tension.

18. The method of claim 17, wherein the step of sealing the closure lid to the container comprises the steps of:

providing a compression link having a container engagement surface and a closure lid engagement surface; and

5 engaging the compression link between the closure lid and the outer wall of the container such that the closure lid is retained in sealing engagement with the outer wall.

19. The method of claim 17, further comprising the steps of:

providing an outer lid configured for engaging a distal end of the container such that the closure lid is disposed between the outer lid and the interior; and

retaining the outer lid in sealing engagement with the container.

20. The method of claim 17, further comprising the steps of:
- providing a backing member; and
- inserting the backing member between the closure lid and the compression link such that insertion therebetween urges the compression link radially outwardly from the closure lid.

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21. The method of claim 17, further comprising the steps of:
- providing a bearing member formed of a material harder than a hardness of said closure lid;
- inserting the bearing member between the closure lid and a portion of the compression link

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22. The method of claim 17, further comprising the step of:
- inserting an exothermic material within the container prior to sealing the closure lid.

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23. The method of claim 22, wherein the exothermic material is spent nuclear fuel.